a spacer layer overlying the lower confinement layer;

an active region overlying the spacer layer, the active region comprising:

a quantum well layer; and

a barrier layer comprising indium;

a cap layer overlying the active region;

an upper confinement layer overlying and adjacent to the cap layer, the upper confinement layer comprising $In_xGa_{1-x}N$, wherein $0 \leq x \leq 0.15$; and

a second conductivity type layer overlying the upper confinement layer;

wherein:

the spacer layer and the cap layer have larger band gaps than the quantum well layer;

the upper confinement layer and the lower confinement layer have larger band gaps than the spacer layer and the cap layer; and

one of the spacer layer and the cap layer comprises indium.

2. (Twice Amended) A light emitting device comprising:

a substrate;

a first conductivity type layer overlying the substrate;

a lower confinement layer overlying the first conductivity type layer, the lower confinement layer comprising indium;

a spacer layer overlying the lower confinement layer, the spacer layer comprising indium;

an active region overlying the spacer layer, the active region comprising:

a quantum well layer; and

an InGaN barrier layer with an indium composition between about 1% and about 15%;

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2635 N. FIRST ST.
SUITE 223
SAN JOSE, CA 95134
(408) 382-0480
FAX (408) 382-0481

a cap layer overlying the active region, the cap layer comprising indium;

an upper confinement layer overlying the cap layer, the upper confinement layer comprising indium; and

a second conductivity type layer overlying the upper confinement layer;

wherein the spacer layer and the cap layer have larger band gaps than the quantum well layer.

3. The light emitting device of Claim 2 wherein the barrier layer is InGaN having an indium composition between about 1% and about 5%.

4. The light emitting device of Claim 2 wherein the barrier layer is doped with a dopant of first conductivity type to a concentration between about 10^{15} cm^{-3} and about 10^{19} cm^{-3}.

5. The light emitting device of Claim 2 wherein:

the barrier layer has a thickness between about 20 angstroms and about 250 angstroms;

the quantum well layer has an indium composition between about 4% and about 25%; and

the quantum well layer has a thickness between about 10 angstroms and about 60 angstroms.

6. The light emitting device of Claim 1 wherein the barrier layer, the spacer layer, and the cap layer each have an indium composition less than an indium composition of the quantum well layer.

7. The light emitting device of Claim 1 wherein the lower confinement layer comprises $In_xGa_{1-x}N$, wherein $0 \leq x \leq 0.02$.

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8. The light emitting device of Claim 1 wherein the lower confinement layer is doped with a dopant of first conductivity type to a concentration between about 10^{15} cm^{-3} and about 10^{22} cm^{-3}.

9. The light emitting device of Claim 1 wherein the lower confinement layer has a thickness between about 50 and about 20,000 angstroms.

10. (Amended) The light emitting device of Claim 2 wherein:

the lower confinement layer has a first indium composition;

the spacer layer has a second indium composition;

the quantum well layer has a third indium composition;

the third indium composition is greater than the second indium composition; and

the second indium composition is greater than or equal to the first indium composition.

11. The light emitting device of Claim 1 wherein the upper confinement layer comprises $In_xGa_{1-x}N$, wherein $0 \leq x \leq 0.02$.

12. The light emitting device of Claim 1 wherein the upper confinement layer is doped with a dopant of second conductivity type to a concentration between about 10^{15} cm^{-3} and about 10^{22} cm^{-3}.

13. The light emitting device of Claim 12 wherein the dopant comprises Mg.

14. The light emitting device of Claim 1 wherein the upper confinement layer has a thickness between about 50 and about 20,000 angstroms.

15. (Twice Amended) The light emitting device of Claim 2 wherein:

the upper confinement layer has a first indium composition;

the cap layer has a second indium composition;

the quantum well layer has a third indium composition;

the third indium composition is greater than the second indium composition; and

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FAX (408) 382-0481

the second indium composition is greater than or equal to the first indium composition.

16. The light emitting device of Claim 1 wherein the cap layer comprises $In_xGa_{1-x}N$, wherein $0 \leq x \leq 0.15$.

17. The light emitting device of Claim 1 wherein the spacer layer comprises $In_xGa_{1-x}N$, wherein $0 \leq x \leq 0.15$.

Please cancel claim 18.

19. The light emitting device of Claim 1 wherein at least one of the cap layer, the upper confinement layer, the lower confinement layer, and the spacer layer comprises a graded composition of indium.

20. The light emitting device of Claim 1 wherein the cap layer is doped with a dopant of second conductivity type to a concentration between about 10^{15} cm^{-3} and about 10^{21} cm^{-3}.

21. The light emitting device of Claim 1 wherein the spacer layer is doped with a dopant of first conductivity type to a concentration between about 10^{15} cm^{-3} and about 10^{21} cm^{-3}.

Please add the following new claims:

22. (New) The light emitting device of Claim 1 wherein the first conductivity type layer and the second conductivity type layer have larger band gaps than the lower confinement layer and the upper confinement layer.

23. (New) The light emitting device of Claim 1 wherein the spacer layer and the cap layer have larger band gaps than the barrier layer.

24. (New) The light emitting device of Claim 1 wherein the spacer layer comprises a composition graded from a first composition in a first region of the spacer layer to a second composition in a second region of the spacer layer, wherein:

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SAN JOSE, CA 95134
(408) 382-0480
FAX (408) 382-0481

the first region is closer to the lower confinement layer than the active region;

the second region is closer to the active region than the lower confinement layer; and

the second composition comprises a higher indium composition than the first composition.

25. (New) The light emitting device of Claim 1 wherein the cap layer comprises a composition graded from a first composition in a first region of the cap layer to a second composition in a second region of the cap layer, wherein:

the first region is closer to the upper confinement layer than the active region;

the second region is closer to the active region than the upper confinement layer; and

the second composition comprises a higher indium composition than the first composition.

26. (New) The light emitting device of Claim 1 wherein the upper confinement layer comprises a composition graded from a first composition in a first region of the upper confinement layer to a second composition in a second region of the upper layer, wherein:

the first region is closer to the second conductivity type layer than the cap layer;

the second region is closer to the cap layer than the second conductivity type layer; and

the second composition comprises a higher indium composition than the first composition.

27. (New) The light emitting device of Claim 1 wherein the lower confinement layer comprises a composition graded from a first composition in a first region of the lower confinement layer to a second composition in a second region of the lower confinement layer, wherein:

the first region is closer to the first conductivity type layer than the spacer layer;

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(408) 382-0480
FAX (408) 382-0481

the second region is closer to the spacer layer than the first conductivity type layer; and

the second composition comprises a higher indium composition than the first composition.

28. (New) The light emitting device of Claim 2 wherein the spacer layer and the cap layer have indium compositions greater than the barrier layer.

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GROUP LLP
2635 N. FIRST ST.
SUITE 223
SAN JOSE, CA 95134
(408) 382-0480
FAX (408) 382-0481